WORLDCOM SM

October 31, 2002

By Electronic Filing

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Written Ex Parte*
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers – CC Dockets No. 01-338, 96-98, and 98-147

Dear Ms. Dortch:

WorldCom, Inc. ("WorldCom") hereby submits this *ex parte* to clarify its position on and address a number of flawed Bell Operating Company ("BOC") assertions relating to unbundled access to DSL-capable fiber-fed loops, or Next Generation Digital Loop Carrier ("NGDLC") loops.[1]

Competitive Local Exchange Carriers ("CLECs") have long urged the Federal Communications Commission ("Commission" or "FCC") to resolve the question of unbundled access to NGDLC loops, which are being widely deployed by the BOCs. In the meantime, several states have addressed the issue and have squarely concluded that CLECs are impaired without access to these loops and associated electronics. The Commission should now seize the opportunity in this Triennial Review to fully resolve the matter. Indeed, unless the FCC takes swift action, the pace of the BOCs' NGDLC deployment will effectively shut down any remaining competition for DSL services.

Competitive carriers have no viable alternatives to fiber-fed NGDLC facilities. Although the BOCs have attempted to convince the Commission that their DSL-capable fiber-fed NGDLC network upgrades are "overlay" networks,[2] the engineering reality is that these network deployments are just another in a long series of steps undertaken by Incumbent Local Exchange

[1] Not all BOC "NGDLC" architectures may be the same. The term "NGDLC" or "fiber-fed loop" thus broadly refers to NGDLC and NGDLC-like facilities involving some form of fiber-fed RT deployed to support both voice and data services.

[2] *See* Comments of SBC Communications Inc., CC Docket No. 01-338, at 61 (filed Apr. 5, 2002).

Carriers ("ILECs") over the years to modernize their networks.[3] The fiber-fed DSL-capable NGDLC network deployment represents the next progression in the basic loop plant architecture.[4] If denied access to DSL-capable fiber-fed NGDLC loops, competitive LECs will be unable to provide DSL services to millions of potential customers, who will then have only one choice of DSL provider – their incumbent LEC.[5]

The only way competitors can provide DSL service to the growing customer base served by fiber is by gaining access to the ILEC's NGDLC loop and associated electronics. There are simply no other viable alternatives. The FCC should find that competitors are impaired without access to two separate UNEs – 1) the loop, which is a fiber/copper combination; and 2) the packet transport, to and from the Remote Terminal ("RT").

CLECs are Impaired Without Access to Fiber-Fed Loops

Lack of unbundled access to NGDLC loops impairs a competitor's ability to provide the services it seeks to offer. As we highlighted in our comments, the national average of access lines served by DLC and NGDLC platforms is expected to swell to 50% by 2004.[6] Clearly these platforms cannot be ignored, especially as they grow to serve the majority of subscribers. Without unbundled access to the NGDLC loop, CLECs will be denied access to a significant portion of potential broadband customers.

The Commission acknowledged the criticality of unbundling the loop in the Local Competition Order:

> Without access to unbundled local loops, new entrants would need to invest immediately in duplicative facilities in order to compete for customers. Such investment and building would likely delay market entry and postpone the benefits of local telephone competition for consumers.... By contrast, the ability of a new entrant to purchase unbundled loops from the incumbent LEC allows the new entrant to build facilities gradually, and to deploy loops for its customers where it is efficient to do so.[7]

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[3] Joint Declaration of Tom Stumbaugh and David Reilly ¶¶ 4-15, Att. D to WorldCom UNE Comments ("Stumbaugh/Reilly Declaration"); Joint Declaration of Tom Stumbaugh, David Reilly and William W. Drake ¶ 18, Att. F to WorldCom UNE Reply Comments ("Stumbaugh/ Reilly/Drake Declaration").

[4] Stumbaugh/Reilly Declaration ¶¶ 4-9; Stumbaugh/Reilly/Drake Declaration ¶ 18.

[5] For example, SBC has repeatedly stated that it is deploying Project Pronto in order to be able to offer DSL to customers with locations farther than 18,000 feet from the central office. SBC claimed it could reach 25 million DSL-capable customer locations as of the end of 2001. SBC Investor Briefing at 5 (Jan. 24, 2002) , *available at:* <http://www.sbc.com/Investor/ Financial/Earning_Info/docs/4Q_IB_FINAL_COLOR.pdf>.

[6] WorldCom Comments at 107.

[7] *Local Competition Order*, para. 378.

Unbundled access to the local loop was critical in 1996 and remains critical today, especially as CLECs enter new service areas – and NGDLC platforms are fast becoming "the loop."

The BOCs insist that fiber-fed loops should remain exempt from unbundling for DSL services because CLECs have adequate alternatives. For example, the BOCs argue that CLECs will continue to have access to existing copper loops left in place upon the deployment of NGDLC systems.[8] As we discussed in our comments, this is a wholly inadequate solution.

As a threshold matter, the ILEC will be able to serve more customers than CLECs because they will have access to both fiber-fed and copper loops, while CLECs will be left to serve only those customers they can reach using copper loops from the central office ("CO"). Moreover, because the RT-based Digital Subscriber Line Access Multiplexers ("DSLAMs") are closer to the customer, the incumbent LECs will be able to offer more attractive service offerings with higher data rates. What's more, the CLECs may not be able to use existing copper because of interference issues. The incumbent LECs' DSL service may interfere with CLEC DSL service provided on all-copper loops, because RT-based ADSL services overpower the weaker CLEC signals that share the same distribution facilities.[9]

The BOCs also say that collocation at the RT is an alternative to unbundled access to NGDLC platforms. SBC, for example, states that "CLECs can access the copper distribution subloop at the first accessible point in the ILEC's network, which is typically either the remote terminal itself or more often the serving area interface, and use it to provision DSL service."[10] This is an uneconomical solution, as a number of the states, including New York, have concluded. For example, the New York Public Service Commission found that "collocation by competitors on the terms offered by Verizon's tariff at these remote terminals is under many circumstances prohibitively costly and slow, and unlikely to be commercially viable."[11]

Remote Terminals generally lack adequate space to allow for collocation of traditional DSLAMs.[12] Additionally, because RTs serve far fewer subscribers than COs, the cost per subscriber is considerably higher when the DSLAM is located in the RT than when it is located

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[8] *See, e.g.,* SBC Reply Comments at 111; Qwest Reply Comments, Declaration of Joseph Farrell, para. 30.

[9] The interference between RT-based ADSL transceivers and home run ADSL loops was the subject of a white paper that WorldCom and others submitted to the FCC's Network Reliability and Interoperability Council (NRIC V). In the white paper, WorldCom and others outlined this issue and urged the Commission to take action to adopt rules that would mitigate this problem.

[10] SBC Reply Comments at 109.

[11] State of New York Public Service Commission, Opinion No. 00-12, Case 00-C-0127, *Proceeding on Motion of the Commission to Examine Issues Concerning the Provision of Digital Subscriber Line Services*, Opinion and Order Concerning Verizon's Wholesale Provision of DSL capabilities (issued Oct. 31, 2000) at 25; In addition, a Texas Arbitrator found that it would cost CLECs between $15,000 and $30,000 per RT, merely to connect their DSLAMs to the copper feeder facilities that run between the RT and the customer premises. *See Petition of Rhythms Links, Inc. against Southwestern Bell Telephone Company for post-interconnection dispute resolution and arbitration under the telecommunications act of 1996 regarding rates, terms, conditions and related arrangements for line sharing*, Public Utility Commission of Texas, Docket No. 22469, Revised Arbitration Award at 66 (citations omitted) ("*Texas Arbitration Award*").

[12] *See* WorldCom Comments at 109.

in the CO.[13] Additionally, the BOCs are designing and deploying RTs to fit only their own equipment, deliberately ignoring CLEC collocation needs, notwithstanding their FCC obligations to the contrary. SBC, for example, in the design of its Project Pronto, unnecessarily elected to hard wire its Remote Terminals. The increased expenses associated with RT collocation render competition on a large-scale basis impossible.[14]

BOCs' "Incentive to Invest" Arguments are Unsupported by the Record and Contrary to Their Public Representations in Other Arenas

Allowing unbundled access to fiber-fed platforms will not undermine ILEC incentives to invest in these facilities, as the BOCs and others suggest. Fiber-fed platforms are merely the next step in the evolution of the network and actually end up saving the ILECs money. This is why the ILECs are rapidly deploying these systems notwithstanding the specter of unbundled access and their claims to the contrary.

For example, in its Reply Comments, SBC endorses the High Tech Broadband Coalition's claim that "unbundling requirements render mass DSL deployment unprofitable for ILECs and probably will reduce DSL investment by at least $6 billion and possibly more than $20 million."[15] SBC also claims that "because of the threat of regulation over NGDLC ... ILECs are basically standing still."[16]

But the truth of the matter is that SBC "ended 2001 with more than 5,800 neighborhood broadband gateways in service, up from approximately 2,000 at the beginning of 2001"[17] – hardly the posture of "standing still." Further, SBC has represented to investors that it will attain "annual savings of $1.5 Billion by 2004" compliments of its Project Pronto NGDLC platform, and that the "capital and expense savings pay for [the Project Pronto] initiative on [a net present value] basis."[18] It is difficult, if not impossible, to imagine that, in the face of this astonishing savings, SBC would halt deployment of Pronto because of unbundling requirements.

Verizon points out that "[t]he harsh reality is that the BOCs will narrowly limit deployment of next generation broadband facilities as long as unbundling obligations remain in place."[19] Yet Verizon recently announced that it intends to deploy DSL capability at 151 RTs on

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[13] *Id.*

[14] Indeed, assuming 20 RTs per CO, and an average cost of $22,500 (the average of $15,000 and $30,000), CLECs would need to spend $450,000 *per central office* in unnecessary collocation costs. The Illinois Commission found that DSLAM collocation in RTs would cost a staggering $130,000 *per RT. See Illinois Bell Telephone Company Proposed implementation of High Frequency Portion of Loop (HFPL)/Line Sharing Service*, 00-0393, Illinois Commerce Commission, Order On Rehearing (Sept. 26, 2001) ("*Illinois Order on Rehearing*") at 36.

[15] SBC Reply Comments at 98 (citing High Tech Broadband Comments at 30).

[16] *Id.* at 106-107.

[17] *See* SBC Investor Briefing, at 5 (Jan. 24, 2002).

[18] www.sbc.com, SBC Investor Briefing, at 2 (Oct. 18, 1999).

[19] Verizon Reply Comments at 70.

or after September 27, 2002 in Maine, Massachusetts, New Jersey, New York, Rhode Island, and Vermont.[20]

The "harsh reality," however, is that, in addition to *saving the BOCs money*, DSL-capable NGDLC systems allow BOCs to increase the reach of their DSL service, thus yielding a larger subscriber base. These key motivators explain the BOCs' unprecedented deployment of DSL-capable NGDLC systems. Indeed, as the Public Service Commission of Wisconsin recently recognized:

> Ameritech initiated its Project Pronto network initiative specifically to overcome limitations inherent in the ability of copper loops to support advanced services to the majority of its customer base.... Project Pronto will extend the market reach of DSL. Ameritech will be able to provide DSL service to an additional 20 million customers throughout the 13-state SBC territory that it cannot serve without Project Pronto.[21]

The Commission clearly cannot give any weight to the BOCs' "lack of incentive" arguments. Rather, it should recognize an *affirmative incentive for rapid rollout* of NGDLC to save the BOCs money and extend the reach of their DSL services.

The BOCs suggest that specific cost inputs, such as cost of capital, need to be adjusted for fiber-fed xDSL capable loops. The FCC's TELRIC rules do not specify whether cost of capital inputs should vary on an element-by-element basis, and so nothing in those rules prevents the states from adopting the BOCs' suggestion. However, to date, the states have been unpersuaded by the BOCs advocacy that cost of capital needs to be varied, and have thus applied a uniform cost of capital across all elements. If the BOCs feel that these xDSL capable loops warrant different inputs from what is being applied today, the place for them to make this argument is in the state cost proceedings. The BOCs' failure to persuade states of the legitimacy of their extravagant cost of capital claims is hardly a reason to impose a national cost of capital. But if the BOCs could show that further guidance from the FCC is needed on this point, the Commission has ample authority to convene a rulemaking to consider this matter. However, the Commission should not let unsubstantiated claims about improper cost of capital calculations delay or otherwise interfere with the impairment analysis it is undertaking in the Triennial Review proceeding. Whatever the merits of the BOCs' claims about cost of capital, the record developed in the Triennial Review Proceeding establishes that WorldCom is impaired in its ability to offer DSL and other telecommunications services without fiber-fed loops, and the FCC should immediately confirm that requesting carriers are entitled to fiber-fed loops.

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[20] *See* Verizon's September 27, 2002 email "Supplemental Announcement Regarding Planned Deployment of an Integrated DSL Capability at the Remote Terminal (RT)."

[21] *Investigation Into Ameritech Wisconsin's Unbundled Network Elements*, Public Service Commission of Wisconsin, Docket 6720-TI-161, Final Decision at 10 (March 22, 2002) ("*Wisconsin Decision*").

CLECs' Need to Differentiate Their Services From Those of the ILEC

If CLECs are not expressly granted UNE access to NGDLC platforms, they will have no other choice but to purchase ILEC broadband "services." And, if CLECs are relegated to purchasing such services (which may not even be economically feasible), there will be no service distinction. Consumers will thus have extremely limited options. This scheme does not comport with the mandate of the Act. CLECs need to distinguish their services from those of the RBOCs, by offering different varieties of xDSL and increased Qualities of Service ("QoS"). Higher QoS classes, enable CLECs to provide consumers with throughput-sensitive applications like video and voice over DSL or IP.

The Commission has expressly recognized the importance of service differentiation. For example, in the *Pronto Waiver Order,*[22] the Commission acknowledged its commitment "to ensuring consumers have access to a broad array of services and technologies. In the SBC/Ameritech Merger Order, we noted that SBC's incumbent LECs have an incentive to stifle innovation by locking their competitors into their choice of technology."[23]

The Commission found that SBC's commitment in the *Pronto Waiver* proceeding would ensure consumers had a wide array of choice, as SBC's commitment involved providing "additional classes or qualities of service, other bit rate offerings, functions, and capabilities made available by the manufacturer."[24] Unfortunately, however, all that ever materialized from SBC's commitment was a very limited Constant Bit Rate ("CBR") of 96 kbps, notwithstanding the fact that SBC's equipment could accommodate greater speed. This underscores the CLECs' need for UNE access.

In addition to the differentiation of service issue, the use of BOC broadband "service" has other drawbacks. In particular, the service is not afforded the protection of Section 251 of the Act, which is applicable to UNEs. The Commission hinted at this in the *Pronto Waiver Order* when it elected to "take no position on whether SBC's Broadband Offering is subject to sections 251-252 or any other provisions of the Act."[25]

Without the protection of Section 251 of the Act, the broadband "service" is subject to modification or even revocation at the whim of the ILEC. Moreover, it is worth noting that Verizon's PARTS tariff is currently being investigated, suggesting that the terms under which Verizon's service is being offered are unreasonable. Further, depending upon the outcome of the Commission's *Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services* in CC Docket No. 01-337, these services may not even be tariffed

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[22] *Applications of Ameritech Corp., Transferor, and SBC Communications, Inc., Transferee, For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules*, CC Docket 98-141, Second Memorandum Opinion and Order, FCC 00-336 (rel. Sept. 8, 2000) ("*Pronto Waiver Order*").
[23] *Id.*, para. 41.
[24] *Id.*, para. 42.
[25] *Id.*, para. 30.

in the future. This will result in even less certainty regarding CLEC access to NGDLC platforms.

FTTH and NGDLC are Distinct Technologies That Should be Addressed Separately

The BOCs also try to muddy the water by suggesting that unbundling NGDLC will somehow have far-reaching negative effects on the deployment of Fiber To The Home ("FTTH") systems.[26] However, as AT&T highlights in its Reply Comments, Fiber-fed loops employing NGDLC facilities and FTTH systems represent two separate technologies that should be bifurcated from a regulatory perspective.[27] NGDLC is here now and being widely deployed, whereas FTTH is a nascent technology, deemed by some to be uneconomical for near term deployment.

The Commission should therefore address NGDLC in this proceeding, as it is a current network architecture, and defer its analysis of FTTH to a separate proceeding at a later time when FTTH technology is sufficiently mature to analyze. Indeed, FTTH is such an *immature* technology, that any consideration of it at this stage would be speculative at best and would likely waste the Commission's resources. As Verizon concedes in its Reply Comments, "there is virtually no BOC investment in next generation broadband infrastructure such as FTTH."[28]

In fact, Corning's Reply Comments are dedicated almost entirely to explaining how FTTH requires an entirely new network that has yet to be built. Corning explains:

> [A] fiber to the home network shares few, if any, components with the legacy infrastructure ubiquitous in ILEC territories. ***Deploying true fiber to the home requires the installation of new network plant (and an entirely different network architecture) from the central office to the customer's home.*** While ILECs have deployed some fiber feeder facilities, this deployment is nowhere near extensive or deep enough to make fiber to the home an incremental addition to the ILECs' networks. The simple fact is, most of the remote terminals or digital loop carriers are not served by a sufficient number of fibers to feed fiber to the home architectures. Moreover, ***as a matter of network design, ILECs prefer to locate the active opto-electronics associated with fiber to the home in the central office which is hardened and where the equipment is more easily accessible.***[29]

Standing in stark contrast to FTTH, NGDLC systems are well established and widely deployed and have reached a certain degree of maturity. FTTH represents a dramatic departure in cost and its widespread deployment will need to be driven by an application such as video on

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[26] *See, e.g.*, SBC Reply Comments at 99, 107; *See also* Verizon Reply Comments at 70.
[27] AT&T Reply Comments at 85-86.
[28] Verizon Reply Comments at 70.
[29] Corning Reply Comments at 5 (internal citations omitted) (emphasis added).

demand. Thus far, the cost of deployment has outweighed any perceived demand. And, even if RBOCs felt FTTH was economical, it may in fact take quite some time to implement. Indeed, SBC, in a recent ex parte, acknowledges as much: "FTTH requires time and huge investment."[30] Equipment vendor ADC further explains: "[i]t is estimated that if all Telco network construction was halted today and those resources applied to FTTH, a complete fiber build-out would take 15 years. It is reasonable to assume that the broadband service provider winners and losers would be decided long before then."[31]

FTTH is envisioned as a future-proof, scalable and more robust architecture – further distinguishing it from NGDLC. In particular, the plant between the CO and the customer will be "passive" (i.e., a Passive Optical Network, or "PON"). A Marconi tutorial on FTTH points out that "[FTTH] is a passive network, so there are no active components from the CO to the end user. This dramatically minimizes the network maintenance cost and requirements, as well as eliminating the need for a DC power network."[32] Therefore, the path between the CO and end user is free of electronics or any systems requiring a power source. NGDLC systems, by contrast, require "active" components between the CO and end user (e.g., RT, line cards, etc.).[33]

Further, NGDLC systems are being deployed to save BOCs money in maintenance, etc. For example, as highlighted above, SBC's $6 billion Project Pronto initiative is expected to "dramatically reduce its network cost structure."[34] FTTH, again in stark contrast, is looked upon as extraordinarily costly – uneconomical at this stage, especially in light of consumer demand. As AT&T highlights, "[o]nly BellSouth has implemented an FTTH residential *trial*, and its assessment is that it is still too expensive to deploy on a wide-scale basis."[35]

To the extent that hybrid NGDLC-FTTH systems evolve or become prevalent, the Commission can address them at a later date, as with FTTH. However, thus far, no such system has emerged.

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[30] SBC ex parte in CC Docket 01-338, "Unified Broadband Overview" slide 8 (Sept. 26, 2002).
[31] *See* < http://www.adc.com >.
[32] *See* < http://www.onforum.com/tutorials/fiber_home/topic05.html?Next.x=40&Next.y=19 >.
[33] SBC submitted an ex parte on October 23 with a slide entitled "wireline and cable are converging toward FTTH – current differences are short lived." Notwithstanding the slide's title, the diagram on the slide does little to show how wireline networks are somehow "converging toward FTTH." Indeed, the diagram shows that the first node after the central office in the FTTH scenario will be passive (i.e., a PON) – not an active RT. This highlights that FTTH is an entirely new network – not one built from existing RT-based networks. See SBC October 23, 2002 ex parte entitled "Multiple ISP Access to Cable and Wireline Broadband Networks, Technical Analysis" at slide 6.
[34] *See SBC Launches $6 Billion Initiative To Transform It Into America's Largest Single Broadband Provider*, News Release, SBC Communications, Inc. at 1 (Oct. 18, 1999), available at
< http://webcast.sbc.com/media/news/release.doc>.
[35] AT&T Reply Comments at 81 (citing RHK Report with emphasis added).

Conclusion

The Commission should use the opportunity presented by the Triennial Review to ensure the survival of broadband competition and customer choice. To that end, the Commission should order unbundled access to fiber-fed loops and, in particular, should find that CLECs are impaired without access to two separate UNEs – 1) the loop, which is a fiber/copper combination; and 2) the packet transport, to and from the RT.

Sincerely,

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